(10)

United States Government **Department of Energy**

# memorandum

**Albuquerque Operations Office**

DATE: DEC 30 1997

REPLY TO
ATTN OF: OSHD

SUBJ: Secretarial Directive, August 4, 1997, DOE Response to the May 14, 1997, Explosion at Hanford's Plutonium Reclamation Facility (PRF)

TO: Federico Peña, Office of the Secretary of Energy, S, HQ

Attached is the Albuquerque Operations Office (AL) end-of-year status report requested by the subject directive. This AL report is configured to reflect the level of effort conducted by both DOE/AL site offices and their respective contractors. This report includes the information requested by your subject directive, your two subsequent directives dated August 27, 1997, your October 21, 1997 directive and the EH-1 memorandum dated October 10, 1997, pertaining to the issues associated with or resulting from the Accident Investigation process.

In summary, I believe that the information presented in this report is indicative of the manner by which AL and its contractors take prudent action to reduce the probability of an event similar to that at the PRF. Recognizing that we utilize a broad range of both chemical and radiological materials in our operations, it becomes critical that as good stewards we manage our operations in a manner that reduces/eliminates hazards in the workplace. To facilitate understanding of the information being submitted, we have constructed a matrix that relates the AL sites to the specific directive and/or guidance. In addition, continuing actions were identified by AL and its contractors and are provided under Tab 8 of this report.

Please contact me should you have questions relative to the information contained in the attached report.

Bruce G. Twining
Manager

Attachment

cc w/o attachment:
See page 2

cc w/o attachment:
G. Ives, DP-20, HQ/FORS
R. Staffin, DP-10, HQ/FORS
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M. Zamorski, KAO
G. Todd, LAAO
J. Tillman, GJO

# Albuquerque Operations Office

# End-of-Year Report

Provided in Response to
Handford Tank Explosion
May 14, 1997

December 1997

# Table of Contents

# TAB 1

# Executive Summary

# Executive Summary

The information provided by AL sites (LANL, SNL, WIPP, Pantex Plant, Kansas City Plant, Grand Junction) in response to the August 4, 1997, Secretarial Memorandum indicate on-going proactive response to the board initiatives. AL sites reviewed chemical use and/or storage having the potential for explosion, fire, or significant toxic release and in general found no problems. Area Offices at respective AL locations are actively involved with the review and approval process for initiatives to ensure chemicals are disposed of or retained in a safe and environmentally compliant manner. As stated in the AL 120 day assessment of known chemical and radiological (where applicable) vulnerabilities, potential areas of concern are being addressed, and to date, the site reports do not reflect identification of new vulnerabilities. The information contained in the attached reports reflect well-characterized waste streams and site reviews did not identify any unknown waste storage tanks with the exception of SNL. Specifically, SNL identified underground storage tanks that are to be characterized. Final characterization of the SNL underground storage tanks is expected to be completed by mid-January 1998.

AL Area and Field Office staff have assessed the technical competency of staff with operational responsibilities. Also, as part of our review of site Lessons Learned and Occurrence Reporting programs, we generally concluded that the sites have processes in place to properly disseminate lessons learned information and reportable events are being categorized appropriately.

A response has been provided for the following secretarial memoranda: Timely Notification of Emergencies and Significant Events dated August 28, 1997, Lessons Learned From the Emergency Response to the May 14, 1997 Explosion at Hanford's Plutonium Reclamation Facility dated August 28, 1997, and Review of Emergency Action Levels dated September 5, 1997. In general, AL has sufficient processes in place to ensure that a response to any event is sufficient and that timely notification is made to AL.

Continuing actions by AL contractors have been identified for information.

AL has prepared a response to the concerns identified from the accident investigation process used to evaluate the Hanford explosion.

In conclusion, the review of chemical processes identified following the Hanford explosion have been investigated by AL and its contractors. In general, programs and processes are in place to mitigate the potential of a Hanford explosion at AL facilities.

# TAB 2

# AL Sites Summary Matrix End-of-Year Report

**Provided in Response to Secretary Peña Memorandum**
**Dated August 4, 1997,**

**"DOE Response to the May 14, 1997 Explosion at**
**Hanford's Plutonium Reclamation Facility"**

# AL SITES SUMMARY MATRIX
# AUGUST 4, 1997 MEMORANDUM
# END-OF-YEAR REPORT

| AL Sites | Requirement-Assess Use & Storage of Any Chemicals for Explosion, Fire, Significant Toxic Release Potential | Requirement-Develop an Approval Process for Retained Chemicals | Requirement- Assess Technical Staff Competency | Requirement-Assess Site Lessons Learned and Occurrence Reporting |
|---|---|---|---|---|
| AAO/PTX | The Review of the use and storage of chemicals revealed that there are no excess, unused or unneeded chemicals on site that pose a significant risk for explosion, fire or toxic release. | The approval process includes the examination of the Toxic Chemical Release inventory Forms, Texas Tier Two Chemical Description Sheets, Chemical Safety Vulnerability Studies and other documents and procedures. | Technical competence for recognition and remediation of hazards by the staff at the Pantex Plant has been reviewed and verified. No problems were identified. AAO staff was reviewed and found to be in the Technical Qualification Program and trained in their respective areas. | Lessons Learned information from within Pantex, and from other DOE sites or group lessons are evaluated by the Pantex Plant Lessons Learned Coordinator to determine whether the Lessons Learned are generic or applicable to a single, multiple division or plant employees and communicates the information accordingly Reportable events or events with potential for categorization are immediately reported to the DOE Duty Officer (DO) and/or the appropriate DOE Facility Representative (FR). A conservative approach is used in the categorization and reporting of events. The DO and/or FR will assess the occurrence, and establish the need and depth of a critique. the critiques are the responsibility of the facility manager |

# AL SITES SUMMARY MATRIX
# AUGUST 4, 1997 MEMORANDUM
# END-OF-YEAR REPORT

| AL Sites | Requirement-Assess Use & Storage of Any Chemicals for Explosion, Fire, Significant Toxic Release Potential | Requirement-Develop an Approval Process for Retained Chemicals | Requirement- Assess Technical Staff Competency | Requirement-Assess Site Lessons Learned and Occurrence Reporting |
|---|---|---|---|---|
| CAO/WIPP | A review of the WIPP chemical inventory revealed that it is correctly stored and there are no unneeded chemicals with the potential for explosion, fire, or significant toxic release that require disposal at this time. | Since no significant chemical activities occur at WIPP, only small amounts of chemically hazardous material are actually procured. This procurement process is contractually authorized by CAO. The CAO Assurance Team performs oversight of the WIPP hazardous material on an annual basis to assure that site programs are being followed. | A recent review of the contractors training indicated that not all of the personnel responsible for the quarterly chemical inventory report were current. Contractor plans to complete outstanding training by December 30, 1997. | A Lessons Learned Working Group has been established and implemented. They review lessons learned material obtained from various sources and develop a lessons learned bulletin from lessons learned material deemed applicable to WIPP.<br>WIPP Senior Management review all occurrence reports prior to being uploaded in the ORPS database. A Facility manager Designee is utilized to write and upload all occurrence reports, ensuring that events are uniformly categorized and information contained in their reports are consistent. A tracking database is used to ensure that ORPS related corrective actions are tracked to completion. |
| KAO/SNL | Other than identifying some unregistered Underground Storage Tanks, no other legacy chemicals, chemicals wastes, or chemicals residuals have been identified during this initiative at this time. | KAO has developed a hazardous material control procedure to assure the disposal or safe storage and handling of chemicals | An assessment of the technical competency of staff using data from the recent DOE/EH evaluation indicated that SNL Management and staff exhibit sufficient technical competence, experience, skill mix and knowledge of hazards | Incoming information for the Lessons Learned program is from a variety of sources and is evaluated by the Lessons Learned program leader, SMEs, line management, others as appropriate for applicability to SNL operations. The information is then |

# AL SITES SUMMARY MATRIX
# AUGUST 4, 1997 MEMORANDUM
# END-OF-YEAR REPORT

| AL Sites | Requirement-Assess Use & Storage of Any Chemicals for Explosion, Fire, Significant Toxic Release Potential | Requirement-Develop an Approval Process for Retained Chemicals | Requirement- Assess Technical Staff Competency | Requirement-Assess Site Lessons Learned and Occurrence Reporting |
|---|---|---|---|---|
| | | | to effectively and safely manage the various research, weapons and production-related programs. A review of the KAO technical competency indicated that all KAO technical personnel are degreed and have been placed in a qualification program. This qualification program is designed to bring the technical person to a higher level of performance in the DOE system. The program is not fully implemented and KAO technical personnel are in various stages of the program. | summarized, reformatted, augmented as needed and disseminated by numerous methods. If a formal response with feedback and tracking is needed, a Critical Action Team can be initiated to investigate and follow-through. |
| KCAO/KCP/KO | ES&H thresholds to quantify limits have been defined for significant or high risk hazardous materials used and/or stored at KCP and KO. These materials are kept below the thresholds. Unused or excess hazardous materials are reviewed for potential re-use or re-sale, and are retained in Chemical Stores to ensure safe storage. | Hazardous materials are segregated and stored based on environmental, fire, and safety aspects of the material as well as the storage temperature requirements. Storage codes are assigned to the materials to ensure proper segregation. These requirements are verified by multiple contractor assessments | The FM&T Qualifications and Training Program establishes qualification, mandatory, and developmental training requirements for all personnel. It is reviewed annually and has been validated by three third party assessments. KCAO personnel have qualification and technical | Occurrence reports, emergency management drills, accident investigations, weekly operating summaries, and daily operation and event reports are reviewed for lessons learned. Corrective actions for lessons learned are distributed to appropriate personnel through printed, and electronic media, and transmitted back to KCAO for |

# AL SITES SUMMARY MATRIX
# AUGUST 4, 1997 MEMORANDUM
# END-OF-YEAR REPORT

| AL Sites | Requirement-Assess Use & Storage of Any Chemicals for Explosion, Fire, Significant Toxic Release Potential | Requirement-Develop an Approval Process for Retained Chemicals | Requirement- Assess Technical Staff Competency | Requirement-Assess Site Lessons Learned and Occurrence Reporting |
|---|---|---|---|---|
| | | annually, and the quarterly KCAO Facility Reviews. | competence reviewed annually. No concerns were identified from this assessment of the area office and contractor staffs. | closure. |
| LAAO/LANL | No chemicals in excess of the OSHA Process Safety Management threshold quantity were found and no unneeded chemicals were identified. | LAAO is developing an approval process based on the a vendor's guide which is based on pertinent federal regulations, pre-visit preparation checklists, hazardous materials rulebook data and scoresheet for rating the processes. | LANL technical competence (i.e., training) is provided at various levels - institutional, facility and operation-specific. This training is track by a database. LANL considers its staff to be technically competent, and systems exist and are in use to identify training needs<br>LAAO has conducted a gap analysis for its technical staff, and provided status document in April 1997. The staff completed its training in August 1997. In addition, cross-discipline training was conducted as part of completing the gap training. | The LANL Lessons Learned and Reporting program is consistent with DOE Order 232.1. Final reports with causal analysis, corrective actions and lessons learned are submitted by LANL to the ORPS system. LANL provides justification for all changes in target submittal dates to LAAO in order to obtain DOE approval. |

# AL SITES SUMMARY MATRIX
# AUGUST 4, 1997 MEMORANDUM
# END-OF-YEAR REPORT

| AL Sites | Requirement-Assess Use & Storage of Any Chemicals for Explosion, Fire, Significant Toxic Release Potential | Requirement-Develop an Approval Process for Retained Chemicals | Requirement- Assess Technical Staff Competency | Requirement-Assess Site Lessons Learned and Occurrence Reporting |
|---|---|---|---|---|
| GJO/MONTICELLO | Contractor have few chemicals that have any potential for explosion, fire, or significant toxic release. The largest quantities of chemicals are associated with a wastewater treatment plant. | The hazards and operating procedures associated with the wastewater treatment plant are addressed in the Site Health and Safety Plan and Operations and Maintenance Manual. DOE-GJO utilizes a formal review of the contractor's Health and Safety Plans and provides concurrence by the DOE-GJO project manager and a health and safety specialist for all HASPs. | Contractor maintain competent staff of personnel who fully recognize the hazards present in the work they perform. Worker qualifications and training is strictly maintained in accordance with 29 CFR 1910.120. | Lessons learned information is distributed to managers, who review the lessons for applicability within their areas of responsibility, and distribute the information with their organization as needed. For occurrence reporting, management determines and documents the significance, nature, and extent of events or conditions, as well as the causes, corrective actions, and lessons learned. The information from contractor occurrences and occurrences from other sites is used to prevent future occurrences. |
| GJO/GRAND JUNCTION | Three "risk areas" were heavily scrutinized and carefully inspected to review storage and use of chemicals, after the Hanford incident. All other buildings were also inspected. No significant findings were noted. In addition, an August 1997 RCRA audit addressing chemical compatibility, storage and ignitability requirements per 40 CFR 265.17 and reactivity of incompatible waste was conducted. No significant deficiencies were noted in the audit. | The purchase, storage, and use of all chemicals used at GJO/GJ. Chemicals are not permitted on site unless they have been received as part of the Chemical Tracking System. Assessments for the use and storage of chemical are conducted using independent audits, weekly walk-around, and informal management observations. DOE-GJO approval is the same as above. | GJO/GJ maintains a competent staff of personnel who fully recognize the hazards present on site and can implement appropriate corrective actions, if necessary. The technical competence is reviewed by the manager annually, and any needs for further training are identified and utilized through the individual development plan process. | Lessons learned are disseminated to GJO/GJ managers for review and further dissemination. Internal lessons are learned from investigations, self-assessments, and post-activity evaluations, and distributed throughout the GJO facility. If beneficial, they are sent out to the DOE Complex through the Occurrence Reporting and Processing System. |

# TAB 4

# Updated AL Sites Summary Matrix - Chem/Rad

# Vulnerabilities/Waste Tanks for 120 day Request

**Provided in Response toSecretary Peña Memoranda**
**Dated August 4 & October 21, 1997,**

**"DOE Response to the May 14, 1997 Explosion atHanford's Plutonium Reclamation Facility, and Assessment of Hazards Associated with Chemical and Readioactive Waste Storage Tanks and Ancillary Equipment"**

# AL SITES SUMMARY MATRIX
# CHEM/RAD VULNERABILITIES/WASTE TANKS

| AL Sites | Requirement-Reassess Known Vulnerabilities (Chem/Rad) | Requirement-Chem/Rad Waste Storage Tank Assessment |
|---|---|---|
| AAO/PTX | No unrecognized or previously unanalyzed hazards; the facility continues to operate and is not in standby or shutdown mode. | Waste streams are well characterized and accounted for. |
| CAO/WIPP | Does not have any facilities that are in the standby, deactivated, shutdown mode and no chemical or radiological vulnerabilities. | Does not have chemical or radioactive waste storage tanks. |
| KAO/SNL | No new chemical or radiological vulnerabilities have been found at active or inactive sites. | Some newly identified underground storage tanks have not been characterized. This will be accomplished by mid January 1998. |
| KCAO/KCP/KO | There are presently no materials that have been identified as sufficiently hazardous and used in large enough quantities to create an emergency level event. | There is no legacy waste and bulk storage tanks for hazardous waste is no longer used. |
| LAAO/LANL | No new chemical or radiological vulnerabilities were identified. Existing vulnerabilities are being adequately addressed. | Waste tanks have been fully characterized. |
| GJO/MONTICELLO | Monticello is an ongoing remediation project; full-time safety staff support for identifying vulnerabilities on a continuing basis. No facilities are in shutdown, in standby, deactivated or otherwise changed. | No waste storage tanks. |
| GJO/GRAND JUNCTION | No buildings have been shutdown or placed in standby; buildings scheduled for deactivation have had all chemicals redistributed or placed in appropriate storage. Routine building inspections have provided continuing evaluation for vulnerabilities and one have been noted. | No waste storage tanks. |

# TAB 5

# AL Sites Summary Matrix for

# Lessons Learned from Emergency Response

# End-of-Year Report

**Provided in Response to Secretary Peña Memorandum**
**Dated August 27, 1997,**

**"Lessons Learned from the Emergency Response to the May 14, 1997 Explosion at Hanford's Plutonium Reclamation Facility"**

AL SITES SUMMARY MARTIX
AUGUST 27, 1997 MEMORANUDM
LESSONS LEARNED FROM THE EMERGENCY RESPONSE

| AL Sites | Emergency Management Decision Making | Protective Equipment & Staffing | Protective Treatment Of Personnel | Hazards Information |
|---|---|---|---|---|
| AAO/PTX | A course was conducted in October 1997, which exposed approximately 40 key emergency response personnel in making conservative judgments about facility conditions and personnel in the absence of confirmed data. No significant shortfalls were identified. | The Pantex Plant emergency response teams are trained, qualified, and equipped to manage any incident. Response vehicles are appropriately equipped to initiate field response and support clean-up activities. Personnel, equipment and response vehicles are available 24 hours a day, 365 days a year. Verification of readiness is through a vigorous active drills and exercise program, and assessments. | Pantex has three on-site ambulances and an on-site Medical Department staffing three physicians all experienced in emergency medicine. For mass casualty incidents they have an agreement with a local ambulance provider for additional support, and maintain a Radiation Treatment Facility in the local Veteran's Affairs Medical Facility. | Procedures are in place to provide local medical facilities with available information on chemical and radiological hazards, as well as timely qualitative and quantitative exposure information for individuals exposed. Exercises are conducted regularly to evaluate emergency medical response. |
| CAO/WIPP | Attended DOE/AL pilot course on October 8, 1997 which emphasized making conservative judgments about facility conditions and personnel in the absence of confirmed data. | WIPP has available equipment and qualified emergency response personnel trained to respond to emergency events determined to be creditable at the site. Personnel and equipment are available 24 hours a day, 7 days a week. Readiness is confirmed through drills, exercises, training and critiques of real events. | WIPP maintains procedures that provide for timely medical attention to injured or exposed personnel. Policies and procedures exist for the care and continued monitoring of affected personnel for an appropriate period of time, and they have been reviewed by local medical authorities. Follow-Up medical surveillance is coordinated through the WIPP monitored care program. | Procedures are in place to provide local medical facilities with available information on chemical and radiological hazards, as well as timely qualitative and quantitative exposure information for exposed individuals. Review and development of these procedures, in conjunction with local medical facilities has been performed. On July 23, 1997, an exercise was conducted implementing emergency response procedures. |

AL SITES SUMMARY MARTIX
AUGUST 27, 1997 MEMORANUDM
LESSONS LEARNED FROM THE EMERGENCY RESPONSE

| AL Sites | Emergency Management Decision Making | Protective Equipment & Staffing | Protective Treatment Of Personnel | Hazards Information |
|---|---|---|---|---|
| KAO/SNL | Attended DOE/AL pilot course on October 8, 1997 which emphasized making conservative judgments about facility conditions and personnel in the absence of confirmed data. | All on-scene responders are voluntary and accept the responder responsibility as an ancillary duty, and have completed the basic requirements needed to qualify for a specific function like a Rad Control Technician. Necessary and appropriate equipment is available for responders. Readiness is evaluated and confirmed on a monthly basis by using drills and exercises. However, operational priorities hinder most responders from participating regularly. | SNL Medical Facility and outside contractors provide timely medical attention to injured/exposed personnel 24 hours a day all year. SNL has a medical procedures manual for patient care that includes emergency response. The manual is reviewed annually and updated as needed. Short term care and long-term surveillance and monitoring is provided. | Hazard Assessment Documents that identify SNL hazards are in place and available to all organizations. Qualified ES&H personal are available to give qualitative and quantitative exposure information to both on-site and off-site medical staff. |
| KCAO/KCP | Realistic exercises have been conducted that test responding to potential emergencies. Tests have confirmed that conservative judgments based on worst case possibilities, are made until confirmed data is available. No significant shortfalls have been identified. | Responders are trained and have the appropriate approved equipment available. On-site hazards have been identified to assure that the responders have the level of protection required. Responders participate in drills and exercises which are evaluated with lessons learned reports to improve performance. | The KCP on-site medical department provides a program for emergency medical service, and with the help of local hospitals and off-site ambulance support provides around the clock service for plant personnel. Follow-Up evaluation and treatment are provided if necessary. Periodic audits are performed of the medical care services. | Emergency Plan documents show the interface between on-site medical personnel and off-site medical personnel. On-site medical personnel will inform the off-site medical care provider with exposure data during transfer of injured personnel. |

AL SITES SUMMARY MARTIX
AUGUST 27, 1997 MEMORANUDM
LESSONS LEARNED FROM THE EMERGENCY RESPONSE

| AL Sites | Emergency Management Decision Making | Protective Equipment & Staffing | Protective Treatment Of Personnel | Hazards Information |
|---|---|---|---|---|
| KCAO/KO | Attended DOE/AL pilot course on October 8, 1997 which emphasized making conservative judgments about facility conditions and personnel in the absence of confirmed data. | PPE is available and adequate for post accident activities. The site has trained emergency personnel including ES&H staff for small chemical spills, and agreements with Kirtland Air Force Base and Sandia National Labs emergency personnel for fires, natural events and large chemical spills. Annual evacuation drills are conducted and chemical spills are simulated for training purposes and to test readiness. | Arrangements for off-site emergency medical services around the clock are in place. Tracking for follow-up evaluation and treatment is done on a case by case basis. | The Emergency Plan documents show the interface between on-site personnel and the emergency care provider, and explains what chemical hazard and exposure information needs to be provided when and exposed individual is transferred for care. |
| LAAO/LANL | Attended DOE/AL pilot course on October 8, 1997 which emphasized making conservative judgments about facility conditions and personnel in the absence of confirmed data. | There are sufficiently equipped and qualified individuals, including health physicists and industrial hygienists along with emergency responders available at all times. the Emergency Response Organization has individuals and emergency response teams on 24 hour call every day of the year. Readiness is evaluated by participation in Tabletop, Command Post and Full Field exercises in addition to an internal assessment program to satisfy the annual participation requirements. | Injured are taken to the LANL medical clinic or the local hospital. In August 1997 a full-participation exercise was conducted by the LANL medical staff and the local hospital involving numerous contaminated injured. The exercise report stated that the exercise was very effective. | Procedures are in place to provide local medical staff with information on hazards at LANL. A review and development with local authorities has been accomplished. These procedures have been proven effective on numerous occasions during actual emergencies, drills, and exercises. |

AL SITES SUMMARY MARTIX
AUGUST 27, 1997 MEMORANUDM
LESSONS LEARNED FROM THE EMERGENCY RESPONSE

| AL Sites | Emergency Management Decision Making | Protective Equipment & Staffing | Protective Treatment Of Personnel | Hazards Information |
|---|---|---|---|---|
| GJO/MACTEC | Was sent videotapes of the October 8, 1997 training session and presented to GJO line management. | PPE is readily available for use in emergency situations, and on-site emergency response personnel are trained in its use. In addition, the Grand Junction Fire Department provides emergency response services for the site. Emergency exercises are conduced twice a year. | Emergency procedures for medical response exist and arrangements were made in August 1997 with the local hospital, Fire Department, and Sheriff's Office to provide appropriate medical attention. | Procedures for providing information to local medical facilities exist. The emergency response team evaluates the extent of the emergency and informs the responding support functions. |
| AL/TSD | Attended DOE/AL pilot course on October 8, 1997 which emphasized making conservative judgments about facility conditions and personnel in the absence of confirmed data. | TSD personnel attend RAD Worker I and II training, maintain SCBA certifications, and also maintain the required equipment and resources necessary for a timely response to any worse case TSD incident. | TSD emergency procedures provide for the coordination with responding law enforcement, fire, and medical organizations with the emphasis on life saving and care for the injured. | Implementation of a new Initial Recommended Protective Action (IRPA) plan was introduced during participation in Exercise DIGIT PACE in May 1997. |

# TAB 7

# AL Accident/Incident Investigation Response

**Provided in Response to Assistant Secretary Dr. O'Toole Memorandum Dated August 27, 1997,**

**"Lessons Learned - Hanford Tank Explosion Accident Investigation"**

United States Government | Department of Energy

# memorandum

Albuquerque Operations Office

DATE: DEC 0 9 1997

REPLY TO ATTN OF: OSHD:NM(97009)

SUBJECT: Response to Lessons Learned Request

TO: Glenn S. Podonsky, Deputy Assistant Secretary for Oversight, EH-2, HQ/GTN

The purpose of this memorandum is to provide a response to the October 10, 1997, memorandum from Dr. Tara O'Toole, to distribution. The attachment contains specific responses to each of the issues identified in the memorandum.

In general, AL believes that:

- AL and EH-21 have established a close working relationship.
- AL is in compliance with the requirements of DOE Order 225.1, *Accident Investigations*, and the implementation guide to the order for typing and conducting accident investigations.
- AL has developed a win-win process to complete and close corrective actions that result from accident investigations.

If you have any questions or comments on this matter, please contact Nate Morley at (505) 845- 4861 or Gene Runkle, at (505) 845-5087 of my staff.

for Bruce G. Twining
Manager

Attachment

cc w/attachment:
See page 2

cc w/attachment:
B. R. Stone, EH-21, HQ/GTN
D. L. Vernon, EH-21, HQ/GTN
J. B. Tillman, GJO
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D. C. Miller, TSD, AL
G. L. Brownlow, PSAD, AL

## Action 1: *Review the major issues in the Attachment*

*Issue 1: There was confusion in determining the accident category.*

Response: The Albuquerque Operations Office (AL) uses the algorithm contained in DOE O 225.1 (now DOE O 225.1A), *Accident Investigations*, for categorizing the need for accident investigations.

In addition, AL works closely with EH-21 to identify accident categories for accidents which may require a formal DOE investigation. Three incidents have fallen in this category in 1997.

- A Los Alamos National Laboratory (LANL) security guard committed suicide on property being leased by the City of Los Alamos. AL staff were in continual contact with EH-21 staff for a period of several weeks to determine whether a Type A accident investigation board would be formed. Both EH and AL waited for the final Los Alamos Police Department report before making a decision whether to convene a Type A accident investigation board. Upon reviewing the reports conclusion that the guard committed suicide AL and EH jointly decided that a Type A board was not warranted for this incident.

- The second incident was categorized as a Type B accident investigation and involved an employee losing a digit on his right hand while operating a lathe at the Tonopah Test Range in July. Due to confusion on which DOE organization had responsibility for the TTR, AL staff again worked closely with EH 21 staff, not only to determine whether a board would be established, but also to determine whether the AL or NV Manager would be the Appointing Official.

- The third incident resulted in a Type B investigation. This investigation is currently ongoing at LANL, due to an estimation of property damage above the one million dollar threshold identified in Attachment 2 to DOE Order 225.1. AL staff have again worked closely with EH-21 staff in answering questions concerning the membership of the board.

In each of these instances AL and EH staff worked very closely to determine the need for, as well as the level of, an accident investigation board. During each of these instances, AL also worked closely with the Program offices that provide funding for the affected organizations.

In addition, AL has implemented a POC training program based on information developed and provided by EH-21. AL has provided this training to staff and

management of all of its Area and Project Offices. The training was given to all AL organizations, with the exception of the Los Alamos Area Office (LAAO), on January 30, 1997. LAAO staff received the training on April 2, 1997. The training these individuals received included a section on accident categorization.

The close working relationship between AL and EH, as well as the actions identified above, should reduce any confusion surrounding the classification a potential accident.

*Issue 2:* *Personnel selected for the accident investigation board were not all DOE personnel who have the training and experience specified in DOE Order 225.1.*

Response: As stated in the response to Issue 1 above, AL follows the requirements contained in the DOE O 225.1/1A. The order requires that only DOE employees participate as accident investigation board members. This has been demonstrated by the fact that no contractor employees have participated on an accident investigation board, either as a Board Chairperson or Board Member since the release of DOE O 225.1, in September 1995.

Furthermore, the order requires that at least one member of the board be trained as a DOE Accident Investigator. AL followed these requirements in determining the composition of the Type B Accident Investigation team for the July 1997 Lathe Accident, as well as the current Type B investigation at LANL.

*Issue 3:* *Accident investigation activities initially were not fully coordinated with actions of the emergency response investigation.*

Response: AL sites report any emergency actions that occur to the AL Emergency Management Branch per the requirements of DOE O 151.1, *Comprehensive Emergency Management System*, and occurrence reporting in accordance with the requirements of DOE O 232.1A, *Occurrence Reporting And Processing Of Operations Information*. The Emergency Management Branch works with the Accident Investigation Points of Contact in the Occupational Safety and Health Division to coordinate emergency response and accident investigation activities. This includes passing information gathered during the emergency response investigation and transferring responsibility to the accident investigation board.

*Issue 3 cont.*

All Area Offices have been provided a copy of the memorandum regarding AL's participation in Accident Investigation activities as part of the emergency management function at AL sites. DOE/HQ, NN-60 (Office of Emergency Management) and DP-23 (Office of Emergency Response) have also been provided the December 2, 1997, memorandum on Lessons Learned for AL.

The training course, sponsored by NN-60, and presented to Emergency Management personnel at AL, Pantex, and Kansas City presented information regarding the Lessons Learned memorandum of August 4, 1997. Decision-making in the emergency management environment was the focus of this training as it pertained to the investigation of the Hanford event.

**Action 2:** ***Review accident investigations processes used by your organization***

Response: The AL accident investigation process follows the requirements contained in DOE O 225.1, as well as the implementation guide to conduct accident investigations. The process will be revised as necessary to bring it into compliance with the revision to the order DOE O 225.1A.

Furthermore, AL has developed the Albuquerque Information Management System (AIMS) to document the Judgments of Need and their corresponding corrective actions. AL also uses AIMS to track the status of Type A and Type B corrective actions, including DOE actions, to closure. EH-21 has reviewed this system and is currently using it to track accident investigation corrective actions on a DOE wide level.

AL has also developed and is implementing a process to work with the organization responsible for completing corrective actions. The process has been used at LANL to close out actions resulting from the December 1995, forklift; January 1996, jackhammer; and July 1996 microwave accident investigations. This process has been well received by LANL and provides a method for DOE to review, and close or request additional information in a timely manner. EH-21 will review this process as part of their closure assessment of the three accident investigations in January 1998.

**Action 3:** ***Identify and implement appropriate corrective actions to preclude a recurrence of the process***

Response: AL will take the following actions:

- Issue a memorandum to all Area/Project Office Managers, applicable AL Divisions, as well as the AI points of contact for AL organizations informing them of the existence of the revised order and guide, and the need to use these documents in the identification of incidents requiring a formal DOE accident investigation board.

- The Occupational Safety and Health Division will revise the AL Accident Investigation process documentation to reflect changes in DOE O 225.1A.

- Emergency Management Branch personnel will attend the January 1998 EH information meeting.

# TAB 8

# Continuing Actions

# at

# AL Sites

# AL SITES'
# CONTINUING ACTIONS

- AL sites will evaluate their facilities and operations for new vulnerabilities on a continuing basis.

- SNL has newly identified some underground storage tanks. These tanks will be characterized by mid-January 1998.

- Pantex has identified a discrepancy between the chemicals on-hand and the chemical database. They plan to fix this problem by requiring the end-users to report the item to a central office for processing once the empty container is disposed of

- LANL is revising its automated chemical inventory system for better performance . In addition, the chemical fume hood inventory is being reviewed to identify hoods for the following:
  - operating in excess of 150 actual feet per minute
  - classified as conditionally approved
  - no further evaluation is required

  Chemical fume hoods requiring additional evaluation will be re-surveyed and this will establish a compliance status with revised procedures.

- WIPP is completing the outstanding training for hazardous material area representatives by December 30, 1997.

- All AL sites are required to document the completion of actions taken in response to the Pena directives in the 1998 Emergency Readiness Assurance Plan (ERAP). Site ERAPSs will be reviewed and forwarded in accordance with DOE O 151.1, Comprehensive *Emergency Management System.*